

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P310143

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P310143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2821.0 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

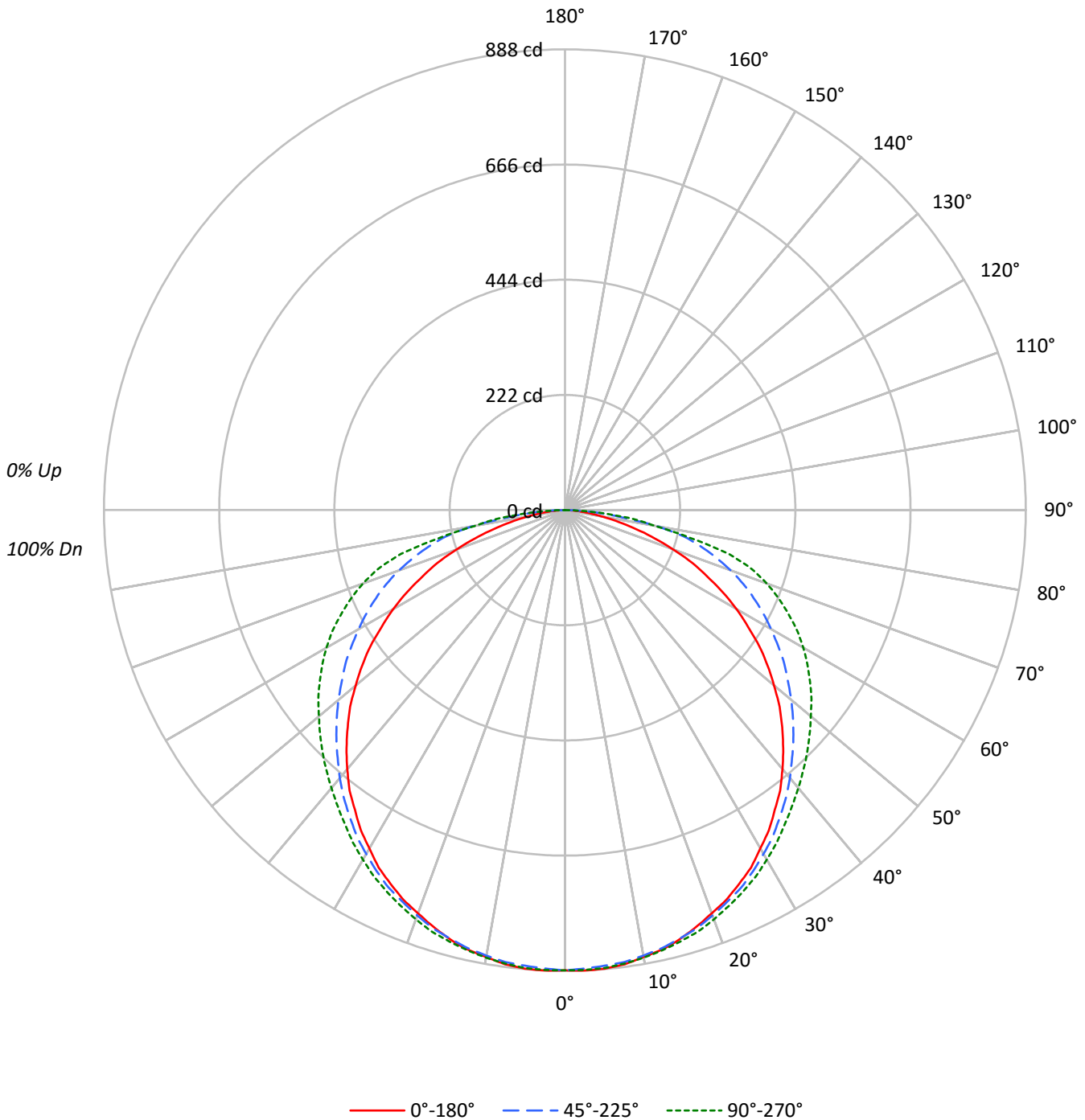
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1194	1194	1194
5°	1198	1191	1196
10°	1195	1191	1197
15°	1193	1191	1199
20°	1184	1190	1202
25°	1180	1192	1205
30°	1170	1189	1209
35°	1158	1186	1214
40°	1145	1185	1229
45°	1126	1185	1257
50°	1101	1192	1295
55°	1073	1211	1352
60°	1028	1235	1427
65°	962	1279	1514
70°	875	1338	1629
75°	742	1411	1702
80°	586	1420	1377
85°	432	1081	1210



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	3.0
10°-20°	242.2	8.6
20°-30°	370.4	13.1
30°-40°	452.7	16.0
40°-50°	482.6	17.1
50°-60°	461.4	16.4
60°-70°	390.8	13.9
70°-80°	262.7	9.3
80°-90°	74.1	2.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	696.7	24.7
0°-40°	1149.4	40.7
0°-60°	2093.4	74.2
0°-90°	2821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	887	886	882	886	886	84
15°	856	856	855	862	860	241
25°	795	798	803	810	812	366
35°	705	711	722	736	739	442
45°	592	602	623	649	660	457
55°	458	474	516	557	576	408
65°	302	333	402	455	476	300
75°	143	194	272	318	327	153
85°	28	57	70	76	78	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	887.1	887.1	887.1	887.1	887.1
2.5°	888.5	888.5	884.3	887.1	887.1
5°	887.1	885.7	881.5	885.7	885.7
7.5°	882.9	881.5	878.7	882.9	881.5
10°	874.5	874.5	871.7	875.9	875.9
12.5°	867.5	866.1	864.7	870.3	868.9
15°	856.3	856.3	854.9	861.9	860.5
17.5°	842.3	843.7	845.1	850.7	852.1
20°	827.0	829.8	831.2	839.5	839.5
22.5°	813.0	814.4	817.2	825.6	825.6
25°	794.8	797.6	803.2	810.2	811.6
27.5°	776.6	778.0	785.0	794.8	796.2
30°	752.8	757.0	765.4	776.6	778.0
32.5°	731.8	736.0	745.8	757.0	759.8
35°	705.2	710.8	722.0	736.0	738.8
37.5°	681.4	685.6	699.6	715.0	719.2
40°	652.1	660.4	674.4	692.6	699.6
42.5°	622.7	631.1	647.9	671.6	680.0
45°	591.9	601.7	622.7	649.3	660.4
47.5°	561.1	572.3	596.1	626.9	639.5
50°	526.1	540.1	569.5	604.5	618.5
52.5°	492.5	509.3	541.5	580.7	598.9
55°	457.6	474.3	516.3	556.9	576.5
57.5°	418.4	440.8	486.9	533.1	554.1
60°	382.0	403.0	459.0	509.3	530.3
62.5°	342.8	370.8	431.0	484.1	505.1
65°	302.2	333.0	401.6	454.8	475.7
67.5°	265.9	299.4	372.2	425.4	446.4
70°	222.5	264.5	340.0	393.2	414.2
72.5°	181.9	228.1	306.4	358.2	377.8
75°	142.7	194.5	271.5	317.6	327.4
77.5°	106.3	160.9	235.1	254.7	247.7
80°	75.6	128.7	183.3	173.5	177.7
82.5°	49.0	97.9	113.3	128.7	132.9
85°	28.0	57.4	70.0	75.6	78.4
87.5°	12.6	21.0	28.0	28.0	26.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)